Self-Generation Incentive Program (SGIP)

Quarterly Workshop

Friday, July 24, 2020 Microsoft Teams Meeting

Hosted by Pacific Gas & Electric Company (PG&E), SoCalGas, Southern California Edison (SCE), and Center for Sustainable Energy (CSE)









SoCalGas: Jason Legner, Laura Crump, Adrian Martinez, Marjorie Bracken

CSE: Andi Woodall, Joe Bick

SCE: Jim Stevenson, Vicky Velazquez

PG&E: Andrew Ace, Ron Moreno

AESC: Dara Salour, Stephanie Raya

Energy Solutions: Andrea Vas, David Zhang









Microsoft Teams Meeting Etiquette

- Microsoft Teams Meeting
- Controls:



- Please remain on Mute
- We will reserve time for questions after each presentation
 - You can ask you question by raising your hand or
 - You can have your question read by entering it in the chat



Agenda (9:00 AM - 1:00 PM)

- Welcome and Introduction
- Energy Solutions Database
- Contacting Program Administrators (PAs)
- Statewide New Equipment Verification
- Customer Resiliency Attestation Form
- Electric Pump Wells
- Equity and Equity Resiliency Resources
- Common Application Issues
- Stakeholder Q & A









SGIP Workshop – Online Database









GHG Updates to PBI



Legacy Projects – Total PBI Payment

Legacy Projects are those submitted before April 1, 2020

Annual PBI Payment = Legacy Payment + New Payment



Legacy Projects – PBI Rates

Legacy Payment



Legacy PBI Rate (\$/kWh)

Projects submitted prior to May 2017

Projects submitted May 2017 to Mar 2020 $\frac{\frac{1}{2}(Incentive\ Amount)}{Storage\ Capacity\ kWh * 130\ cycles * 5yr}$

 $\frac{1}{2}$ (Incentive Amount)

Storage Capacity kWh * 260 cycles * 5yr



Legacy Projects – PBI Rates

New Payment



New PBI Rate (\$/kWh)

 $= \frac{\frac{1}{2}(Incentive\ Amount)}{Storage\ Capacity\ kWh * 130\ cycles * 5yr}$





Legacy GHG Compliance Pathways



Option 1 RTE Pathway :

- Default majority of projects
- Adhere to RTE Requirement from submission year
- Reduce cycling rate from 260 to 130
- No GHG penalty

Option 2 Storage Rate/DR Pathway:

- No projects selected at this time
- Project enrolled in an approved storage rate, or in an economic DR program that is integrated into the CAISO or the DRAM in place of meeting RTE requirements
- Reduce cycling rate from 260 to 130
- No GHG penalty



Option 3 GHG Pathway:

- A few apps at this time
- Reduce cycling rate from 260 to 130
- Emit zero kg/kWh GHGs or less at the developer fleet level on an annual basis

New Storage GHG Requirements





New PBI Requirements for Storage

For new non-residential storage projects, regardless of size, submitted since April 1, 2020:

- The annual RTE requirement is eliminated.
- Cycling requirement for new projects is 104/year
- Reduce GHGs a minimum of 5 kilograms of CO2 per rated energy capacity (kg/kWh) annually to recoup full payment.
- A project's annual PBI payment be reduced by one dollar per kg (\$1,000 per ton) of CO2 under the five kg/kWh reduction requirement, up to 100% of the Expected Annual PBI Payment.
- PBI payment deductions are permanently forfeited and returned to the SGIP incentive budget

New GHG Penalties for Storage - Example

Ρ

Project Information

Annual GHG Penalty

BI Payment Calculator							~
					Perform	ance Dat Applicati	a Details on Alerts
Start Month of Data Reporting	05/2021	Save	Rated Capa	acity (kW)		261.00	
Reserved PBI Incentive	\$200,000.00		Energy Sto	orage Capacity (k	Wh)	522.00	
Expected Annual PBI Payment	\$40,000.00		PBI Payme	nt Rate (\$/kWh)1	\$0.7	3681108	
Total PBI Paid to Date	\$0.00		Assumed /	Annual Cycles		104	
Remaining Reserved PBI Incentive	\$200,000.00		Annual Ex	pected GHG Red	uction (kgCO2)	-2,610	
Calculated PBI Payment	Year 1	Year 2	Year 3	Year 4	Year 5		Total
Annual Production (kWh) Calculated PBI Payment ²	120,046 \$36,937.38					\$	120,046 36,937.38
PBI Payment Adjustments							
Annual Net GHG Offset (kgCO2)	-2,190						
PBI Payment Penalty Impact ³ Remaining Funds Cap Impact	\$420.00						
Amount Paid/Due							
Adjusted PBI Payment⁴ Payment Amount(s) Issued⁵	\$36,517.38 <i>\$0.00</i>					\$	3 6,517.38 \$0.00
					Payment Due	\$3	6,517.38
 PBI Payment Rate = Reserved PBI Incentive / (Storage Capacity kWh *Assumed Annual Cycles * 5 Years). NOTE: Legacy PBI Storage projects may have had a PBI Payment rate adjustment in April 2020 			4) Adjusted I Penalty +	PBI Payment = Ca Reserved PBI Ca	Ilculated PBI Paym ap)	ent - (PBI	Payment
 Calculated PBI Payment = Annual Dis PBI Payment Penalty Impact = \$1.00 Reduction – Annual Net GHG Offset)) 	charge * PBI Paymer * if(<0, (Annual Expe	nt Rate cted GHG	5) Payment	amounts are impo	rted from the Payn	ients pane	l below

Updated Performance Data Details Panel

plication Code:	ABC-SGIP-	2020-0001	Start Mon	th of Data 05/2	021		Print
BI Application	All Storage		Current P	r: Bl Year: Year			
ype:	Els also also	anianal Otananaa					
uel Type:	Electrocher	nical Storage					
apacity (kW):	261					Export Applic	cation Interval Dat
Annual Perfor	mance						
	Number of Cycles	Discharge Events	Energy Stored (kWh AC)	Energy Discharged (kWh AC)	GHG Released (kgCO2)	GHG Avoided (kgCO2)	Net GHG Offset (kgCO2)
Expected ³	104			54, <mark>288</mark>			-2,610
Year 1							-
Year 2							
Year 3							
Year 4							
Year 5							
Total		-	-	-	-		
Monthly Perfo	rmance						
	Number of	Dischargo	Energy Stored	Energy	GHG	GHG	Net GHG

Updates:

- Replaced the "Capacity Factor" column with "Number of Cycles"
 - Removed columns::
 - "Charge Events"
 - "Annual Round Trip Efficiency (%)"
 - "Cumulative Round Trip Efficiency (%)"
 - Add columns:
 - "GHG Released (kgCO2),"
 - "GHG Avoided (kgCO2),"
 - "Net GHG Offset (kgCO2)"
 - Updated the calculation of the "Expected" row per the new PBI Rates



Questions?

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Contacting PAs

- The Commission directs the Joint PAs to adequately staff their program teams to ensure an application is advanced from submittal to review in 10 days and to fully process incentive applications, excluding the time an application is in a suspended status, within approximately 45 to 60 days.
- SGIP PAs shall work with stakeholders to develop reasonable timeline expectations for each step of the application review process and for SGIP PA response times to developer email inquiries.

- Submit general SGIP policy questions to each PAs group email inbox.
 - > The issue is placed on PA working group agenda for discussion / resolution.
 - > Upon resolution by the PAs, a PA will be assigned to respond to the inquiry.

PAs are considering establishing a Statewide email inbox.

- Issues or process questions on specific Applications.
 - Reach out to the appropriate PA of the submitted application.
 - If the inquiry involves a policy issue the PA will present it to the WG for resolution.
 - > The PA will respond appropriately.

Statewide New Equipment Verification

SGIP Equipment Verifications:

New Equipment Verifications
 Continuous Discharge Factory Test Verifications

SGIP Equipment Verifications

1. New Equipment Verifications

- Refers to the engineering reviews of Energy Storage systems or components (batteries and/or inverters) that have not yet been verified in SGIP.
- The verification process determines what the SGIP approved systems values will be for the proposed energy storage system:
 - Rated Capacity: kW-AC
 - Energy Storage Capacity: kWh-AC
 - Discharge Duration: hours

2. Continuous Discharge Factory Test Verifications

- For battery systems, manufacturer and/or system integrator continuous discharge test report of the same make and model as the unit(s) must be provided. Factory reports must also include description of testing approach or methodology and location of test.
- The statewide verification process ensures all requirements for a Factory Test as outlined in the Energy Storage Field Inspection Protocol are met, and that the results of the test over the specified discharge duration are within +/- 5% of the SGIP incentivized capacity.

- The SGIP PA's technical Consultant, AESC, manages the statewide Verifications for New Equipment and Continuous Discharge Factory Tests.
- These Verifications are initiated in one of the following manners:
 - Program participant or equipment manufacturer contacts one of the PAs directly to initiate the SGIP verification of New Equipment or a new Factory Test. PA then assigns the equipment verification to AESC and connects the participant directly with AESC.
 - 2. The PA receives a Reservation Request or Incentive Claim package that includes either New Equipment or a new Factory Test. The application is put into Technical Review and the PA assigns the equipment verification to AESC.
 - 3. If a program participant or manufacturer has an established relationship with AESC, they may contact AESC directly to initiate New Equipment or Factory Test verification.
- Each PA provides final approval before any New Equipment or Factory Tests are approved for SGIP.
- The Program Administrators work directly with AESC to prioritize SGIP Equipment Verifications.

Process for SGIP Equipment Verifications - FAQ

- Can a Reservation Request for a energy storage system that has not undergone an SGIP Equipment Verification be submitted into the program?
 - Yes.
 - SGIP applicants can estimate their proposed SGIP eligible Rated Capacity (kW AC), Energy Storage Capacity (kWh AC), and discharge duration (hours) by utilizing the Energy Storage Sizing Worksheet found on the Selfgenca.com resources page, and the Rating Criteria outlined in section 5.1 of the SGIP Handbook.
 - The SGIP New Equipment Verification will be completed as part of the Reservation Request review to finalize the SGIP approved system values (kW AC, kWh AC, hours duration).
- What happens to individual application reviews when the SGIP Equipment Verification has not yet been finalized for the proposed energy storage system?
 - Individual applications may be put into Suspended Status by the administrators while AESC and the administrators work directly with the Manufacturers, SGIP Applicant and/or Developer to complete the New Equipment Verification for the proposed energy storage system.
 - The Reservation Request approval will not be issued until the New Equipment Verification has been finalized.
 - The administrators may request updated documentation (Reservation Request Forms, or Equipment Specifications) once the New Equipment Verification has been finalized.

Receivables from the applicant:

- Component specification sheets (battery, inverter and/or integrated system)
- UL certificates (Battery: UL1973, 1642, 1989; Inverter: UI1741; Integrator: UL9540)
- Completed NEV workbook
- Factory discharge test data if available*



Receivables from the applicant:

- Factory or Field Discharge test results
- Supporting information such as:
 - Make and Model of the system tested
 - Test location
 - Metering information, etc.

Equipment Review and Discharge Data Review Process Flow

Customer Resiliency Attestation Form

- This workbook is a tool designed as an example to support the completion of the SGIP Resiliency Attestation.
- Customer expectations should be provided by the developer/manufacturer prior to entering into contract.
- This workbook is not designed to replace or establish resiliency performance expectations.
- This workbook is not a required document and should expected system performance differ from this example, this workbook should not be used to complete the attestation.

This workbook will assist in generating 'Proposed System Informat Please fill in Yellow colored cells only.	ion Attestation' form.	Notes:
Application Information		
Date: dd/mm/yyyy		
Developer Contact Name:		
Developer Contact Title:		
Host Customer:		
Application Number:		
Project Site Address:		
City, State, Zip:		
Residential or Non-Residential Project?		
System Information		
System Make:		
System Model:		
Advanced Energy Rated Capacity (kW):		
Advanced Energy Storage Capacity (kWh):		
What is the battery Depth of Discharge (DoD) setpoint (Usually 80~90%)?		Battery is typically not allowed to be drained 100% to maintain battery health. DoD may vary between 50%~95%.
What is the 'Reserve for Power Outages' or 'Backup Reserve'?		Battery may be allowed to keep 20~50% of capacity as reserve for power outage as programmed in the controller.
Is the storage system set to be charged from the grid at night during off-peak hours?		Battery may be allowed to be charged from grid at night during off peak hours as programmed in the controller.

CRA Workbook Critical Load Information

Fill in critical loa	ads' name and rated o	capacity.		Examples of Qualifying Medical Equipment
Load Name	Load Size (kW)	Usage Hours per Day	kWh	Aerosol Tent
			0.0	Air Mattress/Hospital Bed
			0.0	Apnea Monitor
			0.0	Breather Machine (IPPB)
			0.0	Compressor / Concentrator
			0.0	Dialysis Machine
			0.0	Electronic Nerve Stimulator
			0.0	Electrostatic Nebulizer
			0.0	Hemodialysis Machine
			0.0	Infusion Pump
			0.0	Inhalation Pulmonary Pressure
			0.0	Iron Lung
			0.0	Left Ventricular Assist Device (LVAD)
			0.0	Motorized Wheelchair/Scooter
			0.0	Oxygen Generator
			0.0	Pressure Pad
			0.0	Pressure Pump
			0.0	Pulse Oximeter/Monitor
			0.0	Respirator (all types)
			0.0	Suction Machine
			0.0	The Vest/Airway Clearance System
Total	0.0	0.0	0.0	Total Artificial Heart (TAH-t)
				Ultrasonic Nebulizer
				Devices used for therapy but not medically required for sustaining life do not qualify.

Fill in the latest monthly kWh with a available.	as much information as
Site Energy Consumption	kWh
Jan	
Feb	
Mar	
Apr	
Мау	
Jun	
Jul	
Aug	
Sep	
Oct	
Nov	
Dec	
Average Site Load (kW)	0.0

System Calculations				
Project size	Units			
Advanced Energy Rated Capacity	kW	0		
Advanced Energy Storage Capacity	kWh	0		
Battery DoD setpoint (Usually 80~90%)	%	0%		
'Reserve for Power Outages' or 'Backup Reserve'	%	0%		
Is the storage system set to be charged from grid at night off peak hour?	Yes/No	0		
Useful capacity of the storage system	kWh	0.0		
Average site load	kW	0.0		
Site critical load	kW	0.0		
Fully charged battery will provide electricity to average site load for	hrs	#DIV/0!		
Fully charged battery will provide electricity to site critical load for	hrs	#DIV/0!		
Less-than favorable circumstances				
Remaining capacity next PSPS morning/without sunlight	kWh	0.0		
Battery will provide electricity to average site load for	hrs	#DIV/0!		
Battery will provide electricity to site critical load for	hrs	#DIV/0!		

Fill in Yellow colored cells to respond to Questions 2 and 5 relating to:

- whether the project's critical loads can and will be isolated
- information given to the customer about how the customer may best prepare the storage system to provide backup power, in the case of a Public Safety Power Shutoff (PSPS) event announced in advance
- Answers to Questions 1, 3 and 4 are pre-filled from data in previous tabs.
- When finished, save the workbook file.
- Press "Generate Attestation Form" button at the bottom of the page to generate pdf and save a copy before closing.

Electric Pump Wells

Not part of Senate Bill 700

- Added as eligibility pathway in D. 20-01-021
- Must still meet all other Equity Resiliency Requirements (HFTD/2+ PSPS events, etc.)
- Decision states that well pumps must be relied upon for critical drinking water, sanitation and fire response (i.e. not agricultural use)
- To date majority of Equity Resiliency Applications have been under Well Pump eligibility (2/3rds in some PA territories)

Random sample of 150 applications in PG&E's territory

SGIP Equity Resilience Budget Well Pump Applicant Profile ¹		
Average Home Value	\$888,663 ²	
Average Home Size (Sq Ft)	2,586³	
Average Home Price Ratio to County Average	158% ⁴	
% of Homes > \$1 MM	30%	
% of Homes Less Valuable than County Average	21%	
Average Incentive Reserved	\$25,669	

¹ Data summarize 150 randomly selected applicants with reserved incentives that qualified exclusively through the well pump criteria. An additional 19 were randomly drawn, but did not have reliable Zillow data available.

² Home values are proprietary, publicly available estimates from Zillow.com.

³Home size data also taken from Zillow, but the original source is tax assessor data.

⁴County average home values (Zillow Home Value Index, All Homes) available at <u>https://www.zillow.com/research/data/</u>

Well Pumps

- On July 7th, Energy Division sent a letter to the four PAs providing guidance to implement a screening procedure that was not articulated in any former Decision founding the Equity Resiliency Budget
- New requested procedure requires that applicants prove that SGIP well pump properties serve as the Host Customer's "Primary Residence"
- Applications that would not be able to furnish such proof would be canceled
- The letter states that this new rule will retroactively apply to applications already granted a Conditional Reservation
- The PAs are each currently determining how best to apply this undocumented and informally filed new rule

SGIP Equity and Equity Resiliency Resources

Equity Budget Background

In October of 2017, the California Public Utilities Commission directed SGIP to establish an **Equity Budget** to ensure that a significant portion of the SGIP budget will be reserved for projects located in disadvantaged and low-income communities and for customers that meet specific eligibility requirements. The objective is that these investments will*:

- 1) Bring positive economic and workforce development opportunities to the state's most disadvantaged communities
- 2) Help reduce or avoid the need to operate conventional gas facilities in these communities, which are exposed to some of the poorest air quality in the state, and
- Ensure that low-income customers, and non-profit or public sector organizations in disadvantaged or low-income communities have access to energy storage resources incentivized through SGIP

In September of 2019, to help deal with critical needs resulting from wildfire risks in the state, the Commission has directed SGIP to establish an **Equity Resiliency** budget. The Equity Resiliency budget sets aside funds for*:

- 1) Vulnerable households located in Tier 3 and Tier 2 High Fire Threat Districts
- 2) Customers affected by 2 or more Public Safety Power Shutoff (PSPS) events
- 3) Critical services facilities serving those districts
- 4) Customers located in those districts that participate in low-income solar generation programs.

SGIP Handbook

https://www.selfgenca.com/documents/handbook/2020

Equity Resiliency Matrices

Residential: <u>https://www.selfgenca.com/documents/handbook/res_matrix</u>

Non-Residential: <u>https://www.selfgenca.com/documents/handbook/non-res_matrix</u>

Other Resources

SGIP Eligibility Maps, Find an Installer Tool, CPUC webinar recordings https://www.cpuc.ca.gov/sgipinfo/

Equity and Equity Resiliency FAQ

A new FAQ for Equity Resiliency applications will be posted on https://www.selfgenca.com/home/resources/

This FAQ focuses on eligibility and applications questions the PAs field. Applicants are encouraged to refer to the FAQ before reaching out to their PA.

Common Application Issues

1. Not Submitting Proof of Eligibility for a Specific Qualifier

Ex. Customer has claimed they are a medical baseline customer but is unable to provide a bill showing their medical baseline status. Customer submit a copy of their application or a blank/insufficient document instead.

Ex. Utility bill does not show an SGIP-approved rate and no clarification is provided by the Applicant

2. Blank/Incomplete Documents

Ex. PMP template is uploaded with few or no fields completed. Ex. Utility bill is incomplete and missing required information.

3. Missing Signatures on Application and/or Supporting Documents

Ex. The RRF is signed only by the Applicant and is missing the Host Customer signature.

Ex. The purchase and installation contract is only signed by the customer and is missing the contractor signature.

Ex. Building Inspection Approval missing AHJ signature.

4. Supporting Documentation Fails to Address Site-specific Conditions

Ex. The PMP is copied from the PA example, does not adequately the customer's site and installation

Ex. The Customer Resiliency Attestation contains generic information for each customer and does not describe how the customer's specific loads will be supported in the event of an outage.

5. Supporting Documentation Conflicts with Information on RRF/ICF

Ex. Equipment listed on the SLD/contract/PMP does not match the equipment identified on RRF

Ex. PTO for the solar PV system rather than the energy storage system is provided Ex. Supporting documentation is for a customer/site not listed on the RRF

6. Duplicate Applications

Ex. Applicant has previously submitted an application to a general market budget but has decided to submit the customer's application to the Equity Resiliency Budget without cancelling the first application.

Ex. The customer has changed the system size and no longer qualifies for the original budget category. A new application is submitted without cancelling the original application.

7. Placeholder Documents

Ex. Applicant has submitted a document stating they will provide the information required in the Handbook upon request, such as proof of income or load justification

8. Applicant is Unable to Justify the System Size

Ex. Inadequate load justification is provided (does not show a peak demand greater than kW of the system)

Ex. Utility data not provided at all

Ex. For systems for which a peak demand is not available, the Applicant does not follow the methodology for calculating the load as outlined in section 220 of the National Electric Code (NEC)

Q & A

• Contact Information

Southern California Gas Company (SoCalGas)

Website:	https://www.socalgas.com/for-your-business/power-
	generation/self-generation-incentive
Email Address:	selfgeneration@socalgas.com
Mailing Address:	Self-Generation Incentive Program
-	Southern California Gas Company
	555 West Fifth Street, GT20B8
	Los Angeles, CA 90013-1011
	•

Southern California Edison (SCE)

Website:	www.sce.com/SGIP
Email Address:	SGIPgroup@sce.com
Telephone:	(626) 302-0610
Mailing Address:	Self-Generation Incentive Program
-	Southern California Edison
	P.O. Box 800
	Rosemead, CA 91770-0800

Center for Sustainable Energy® (CSE)

Website:	www.energycenter.org/sgip
Email Address:	sgip@energycenter.org
Telephone:	(858) 244-1177
Mailing Address:	Center for Sustainable Energy
-	Attn: Self-Generation Incentive Program
	3980 Sherman Street,
	Suite 170
	San Diego, CA 92110
	•

Pacific Gas & Electric (PG&E)

Website:	www.pge.com/sgip
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Telephone:	1 (877) 743-4112
Mailing Address:	Self-Generation Incentive Program
	PO Box 7433
	San Francisco, CA 94120
Overnight Mailing Address:	245 Market Street
	Mail Code N9K
	San Francisco, CA 94105-1797

Thank You

Appendix

The Customer Resiliency Attestation Form and Workbook, and the Equity and Equity Resiliency FAQ is available at https://www.selfgenca.com/ho me/resources/